

Title (en)
IMPROVED FEEDBACK CONTROL OF NEUROMODULATION

Title (de)
VERBESSERTE RÜCKKOPPLUNGSREGELUNG VON NEUROMODULATION

Title (fr)
COMMANDE DE RÉTROACTION AMÉLIORÉE DE NEUROMODULATION

Publication
EP 3439732 A4 20191218 (EN)

Application
EP 17778477 A 20170405

Priority

- AU 2016901264 A 20160405
- AU 2017050296 W 20170405

Abstract (en)
[origin: WO2017173493A1] An automated method of controlling neural stimulation. A neural stimulus is applied to a neural pathway in order to give rise to an evoked action potential on the neural pathway, and the stimulus is defined by at least one stimulus parameter. A neural compound action potential response evoked by the stimulus is measured. From the measured evoked response a feedback variable such as observed ECAP voltage (V) is derived. A feedback loop is completed by using the feedback variable to control the at least one stimulus parameter value for a future stimulus. The method adaptively compensates for changes in a gain of the feedback loop caused by electrode movement relative to the neural pathway. A compensating transfer function is applied to the feedback variable, the compensating transfer function being configured to compensate for both (i) a distance-dependent transfer function of stimulation, and (ii) a distance dependent transfer function of measurement which is distinct from (i).

IPC 8 full level
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CPC (source: EP US)
A61B 5/0031 (2013.01 - EP US); **A61B 5/24** (2021.01 - EP); **A61B 5/388** (2021.01 - US); **A61B 5/4836** (2013.01 - EP US); **A61N 1/0551** (2013.01 - US); **A61N 1/18** (2013.01 - EP US); **A61N 1/36067** (2013.01 - EP US); **A61N 1/36071** (2013.01 - EP US); **A61N 1/36075** (2013.01 - EP US); **A61N 1/36132** (2013.01 - US); **A61N 1/36139** (2013.01 - EP US); **A61N 1/36146** (2013.01 - EP); **A61N 1/36185** (2013.01 - EP); **A61N 1/37264** (2013.01 - EP US); **A61N 1/3787** (2013.01 - EP US)

Citation (search report)

- [XA] US 2016082265 A1 20160324 - MOFFITT MICHAEL A [US], et al
- [A] WO 2015074121 A1 20150528 - SALUDA MEDICAL PTY LTD [AU]
- [A] WO 2016011512 A1 20160128 - SALUDA MEDICAL PTY LTD [AU]
- [A] US 2014288551 A1 20140925 - BHARMI RUPINDER [US], et al
- See references of WO 2017173493A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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